REMARKS

The applicant has canceled all claims previously withdrawn as being directed to non-elected species. The applicant has also canceled claims 46-49.

Examiner provisionally rejected claims 1-17 and 35-41 under the judicially created doctrine of obviousness-type double patenting. Enclosed is a terminal disclaimer that overcomes the Examiner's rejection.

The Examiner objected to the Abstract because it contained less than 50 words. The Abstract as been amended to overcome the Examiner's objection.

The Examiner rejected independent claims 1, 7, 11, 18, 22, 27, 31, 34, 35, 36, 39, 42, 45, 46, 48, 50, 61, and 62 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. The Examiner's rejection is based on the belief that each of the steps recited could be done solely in one's mind, and thus each rejected claim is directed to an abstract idea. Claim 62 was directed to a non-elected species, and has been canceled. Claims 46 and 48 have been canceled, hence the Examiner's rejection with respect to these claims is moot. With respect to the remaining claims, the Applicant respectfully suggests that the Examiner is in error, as each recites limitations that cannot exist in a person's mind. For example, each of claims 1, 7, 11, 18, 22, 27, 31, 34-36, 39 42, and 62 each recite the limitation of identifying a plurality of segments of a video, *each segment including a plurality of frames of said video*, where the resulting summarization *is to include the plurality of segments*. While it true that the identification could occur in one's mind, the summarization could not because the idea of the summarization would not actually include the identified plurality of segments of the video frames, but merely the memory of them. In addition, claim 45 includes limitations that require the segments to include both full and slow motion plays of the full plays where a user may select from either only full, only slow, or both full and slow motion plays. This type of summary is not merely an abstract thought. Claim 50 requires the generation of a video, which is not an abstract step. Claim 61, as amended, requires that the summarization include segments of video potentially having graphical, i.e. rendered, text

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segments. Therefore, the applicant respectfully requests that the Examiner withdraw the rejection under 35 U.S.C. § 101.

The Examiner rejected claims 22, 27, 28, and 31-33 under 35 U.S.C. § 102(b) as being anticipated by Li et al., "Event Detection and Summarization in Sports Video"(hereinafter Li). The Examiner rejected claims 18-21, 23-26, 29-30, 34, and 61 under 35 U.S.C. § 103(a) as being obvious in view of the combination of Li with either Kawashima, et al. "Indexing of Baseball Telecast for Content-Based Video Retrieval" 1998 (hereinafter Kawashima) (discussed later) or Standridge et al. Li has not been noted by either the Examiner in a form PTO 892 Notice of References Cited or by the Applicant in an Information Disclosure Statement. However, the applicant assumes that the reference is an IEEE article that, to Applicant's knowledge, was first published in Hawaii in December of 2001, less than one month prior to Applicant's filing date. Thus the reference may not properly form the basis of a rejection under 35 U.S.C. § 102(b). Furthermore, because the present inventor was an author of the article, it would not be available as prior art under 35 U.S.C. § 102(a) because (1) it would not be a disclosure by another and (2) because the article itself would be prima-facie evidence that the inventor, i.e. the co-author, was in possession of the invention prior to the article's publication. Therefore, the Li article is also unavailable as a reference under 35 U.S.C. § 103. The applicant notes that the Examiner has the obligation to determine the date of a reference. *See* MPEP § 706.02(a). Thus if the Examiner is aware of a publication of the Li reference prior to the December 2001 Hawaii publication, the Examiner should first cite the reference in a form PTO 892 Notice of References Cited. However, absent any evidence of an earlier publication that was more than one year prior to applicant's filing date, the Li article is unavailable as a reference against the present application, Therefore, the Applicant respectfully requests that the Examiner withdraw the rejection of claims 18-33 and 61.

The Examiner rejected the remaining claims under 35 U.S.C. § 103(a) as being obvious in view of Kawashima or the combination of Kawashima with other references. Kawashima discloses a specific method of identifying pitching/batting sequences in a baseball game and including those sequences in an indexed summary available for browsing by a user. Each of the Examiner's rejections is premised on the assumption that the method disclosed by

Kawashima could be easily modified to similarly summarize video of a sumo match or tournament. The Applicant respectfully suggests that the Examiner is incorrect, and that the summarization method disclosed by Kawashima would not work with sumo.

Specifically, Kawashima discloses on pp. 872—873 that the beginning of play segments to be indexed and summarized are detected using a minimal warp function where input video sequences are compared to reference sequences of pitching/batting segments, in order to detect motion vectors characteristic of a baseball being pitched and/or a bat being swung. Once such a segment start is identified, the segment end is determined by an analysis of scene characteristics after a cut, e.g. if the next scene after a cut indicates a view of the field, it is assumed that the ball has been hit and the play continues. In order to determine the effectiveness of the method, however, the authors conducted experiments that found that the system could not reliably identify the beginning of play segments where colored bats were used, presumably because the motion of the bats could not be reliably distinguished from the background. *See* Kawashima at p. 874, 1st paragraph and p. 873 lines 4-7 (stating that the play detection method is based on the fraction of a moving object in an attention area). The Applicant also notes that these experimental results were confirmed by their analysis of Sumo summarization techniques, where they concluded that the similarity between the skin tones of the Sumo wrestlers and the color of the underlying wrestling stage made motion detection, hence detection of the start of a play, unreliable. *See* specification at p. 10 lines 23-25. Therefore, the present inventors were forced to develop more complex techniques for detecting the initial charge of the Sumo wrestlers. *See, e.g.* specification at p. 10 lines 28-30 (detecting a single blob for each participant); *Id.* at p. 10 line 32 to p. 11 line27 (describing a one-dimensional projection method).

Thus, one of ordinary skill in the art, reading Kawashima, would recognize that the reliability of the play detection methods disclosed therein are heavily dependent upon the scene characteristics of the plays to be detected, and that, although reliable in baseball where non-colored bats are used for batting, such methods would not necessarily be reliable in other sports having different scene characteristics. More specifically, given that the play detection method of Kawashima relies upon a purely mathematical calculation of the fraction of moving pixels in a region, and isn't sufficiently robust to withstand the minor scene variance of a batter using a

colored bat, one of ordinary skill in the art would not have a reasonable expectation that the disclosed method could *predictably* be used in other sports. *See, e.g.* MPEP § 2143.02 (stating that predictability is a requirement for a showing of a reasonable expectation of success).

Therefore, the Examiner's rejection of each of claims 1-17 34-42, and 45 is improper and these claims should be allowable.

In view of the foregoing amendments and remarks, the applicant respectfully requests reconsideration and allowance of claims 1-42, 45, and 61.

Respectfully submitted,

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